

Attorney Docket No. MSU 4.1-655
Appl. No. 10/698,921
Amdt. Dated: January 12, 2006
Reply to Office Action of 12/06/2005

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS

-1- (Currently Amended)

A method for forming a diamond thin film which comprises:

(a) vapor depositing a diamond thin film (DTF) on a substrate which is dissolvable by a chemical solution which does not dissolve the DTF;

(b) dissolving the substrate in the chemical solution so that the thin film remains in the chemical solution and is drapable; and

(c) removing the drapable DTF from the chemical solution and placing the DTF into a non-etching solution so that the DTF floats on the surface of the aqueous non-etching solution, wherein the DTF when removed wet from the non-etching solution has the ability to form various shapes as a result of being drapable and to be dried when the non-etching solution is removed from the DTF.

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-2-(Original)

The method of Claim 1 wherein in addition the DTF is removed from the non-etching solution and deposited while wet on a support means.

-3-(Original)

The method of Claim 2 wherein the support means is placed in the non-etching solution and then removed from the non-etching solution with the DTF on the support.

-4-(Original)

The method of Claims 1 or 2 wherein the non-etching solution is an aqueous solution.

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-5-(Original)

The method of Claims 1 or 2 wherein the non-etching solution is essentially water.

-6-(Original)

The method of Claims 1 or 2 wherein the DTF provides a window which is transparent to electromagnetic radiation in a holder as a support.

-7-(Original)

The method of Claim 2 wherein the DTF is secured by bonding to the support means.

-8-(Original)

The method of Claim 1 wherein the film has a thickness of about 10 microns or less.

-9- (Original)

A method for forming a composite structure with a diamond thin film which comprises:

(a) vapor depositing a diamond thin film (DTF) on a substrate which is dissolvable by a chemical solution which does not dissolve the DTF;

(b) dissolving the substrate in the chemical solution so that the thin film remains in the chemical solution and is drapable;

(c) removing the drapable DTF from the chemical solution and placing the DTF into a non-etching solution so that the DTF floats on the surface of the aqueous non-etching solution;

(d) placing the drapable DTF on a support means; and

(e) securing the flexible DTF on the support means and removing the non-etching solution so that the DTF is dry to form the composite structure.

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-10-(Original)

The method of Claim 9 wherein the DTF is removed from the non-etching solution and deposited while wet on the support means.

-11-(Original)

The method of Claim 9 wherein the support means is placed in the non-etching solution and then removed from the non-etching solution with the DTF on the support.

-12-(Original)

The method of any one of Claims 9, 10 or 11 wherein the non-etching solution is an aqueous solution.

-13-(Original)

The method of any one of Claims 9, 10 or 11 wherein the non-etching solution is essentially water.

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-14-(Original)

The method of any one of Claims 9, 10 or 11 wherein the DTF provides a window in the holder which is transparent to electromagnetic radiation.

-15-(Original)

The method of Claim 9 wherein the DTF is secured by bonding to the support means.

Claims 16 - 21 (Cancelled)